

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for determining a characteristic parameter of an analyte independent of ~~the a~~ flow velocity of the analyte, wherein measurement of the characteristic parameter of the analyte is capable of being influenced by or dependent on the velocity of the analyte, said method comprising:

- (a) ~~providing a means for~~ transporting a fluid medium comprising the analyte from a first position to a second position of a fluid flow channel of a fluidic device;
- (b) measuring the characteristic parameter of the analyte within the fluid flow channel at a plurality of ~~locations~~ different detection zones separated along the fluid flow channel a flow path of the analyte in between the first and the second positions; and
- (c) determining ~~the a~~ velocity dependence ~~component~~ of the measurement of ~~analyte and~~ the characteristic parameter and determining the characteristic parameter of the analyte independent of the flow velocity of the analyte by using the measured characteristic parameters of step (b) and normalizing the measurement by substantially eliminating the velocity ~~component~~ dependence of the measurement.

2. (Canceled).

3. (Original) The method of Claim 1, wherein said fluidic device is a microfluidic device.

4. (Original) The method of Claim 3, wherein said means for transporting a fluid medium comprises a peristaltic pump or electroosmosis.

5. – 6. (Canceled).

7. (Currently Amended) The method of Claim ~~6~~ 1, wherein ~~said the~~
characteristic parameter of the analyte is measured in step (b) with a laser beam guiding device is
that comprises an acousto-optic modulator.

8. – 9. (Canceled).

10. (Currently Amended) The method of Claim ~~9~~ 1, wherein the analyte is a cell,
an oligonucleotide or an organic compound.

11. (Original) The method of Claim 10, wherein the analyte is a cell and said
method is used for cell sorting.

12. (Original) The method of Claim 10, wherein the analyte is an oligonucleotide
and said method is used determine the number of nucleotides in the oligonucleotide.

13. (Currently Amended) The method of Claim 12, wherein said step of
determining number of nucleotides in the oligonucleotide comprises:

(A) attaching a fluorescent molecule to the oligonucleotide to produce a
modified oligonucleotide prior to measuring velocity independent characteristic parameter of the
modified oligonucleotide, wherein said characteristic parameter is an integrated fluorescent peak
area of said modified oligonucleotide; and

(B) determining the number of nucleotides in the oligonucleotide by
comparing the velocity independent integrated fluorescence peak area of the modified
oligonucleotide with a velocity independent fluorescence peak area of a standard
oligonucleotide, wherein the velocity independent fluorescence peak area of the standard

Appl. No. 09/970,453

Amdt. dated April 21, 2005

Amendment under 37 CFR 1.116 Expedited Procedure

Examining Group 1641

PATENT

oligonucleotide has been calibrated to the number of nucleotides present the standard
oligonucleotide.